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Official Change in Host-Host Protocol

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This is an official change to the Host to Host protocol, this document should be filed with the protocol specification (nic -- 8246,) in the Current Network Protocols Notebook (nic -- 7104,). 3

-- Jon Postel 3a

This document corrects an ambiguity in the current host-host protocol, concerning the ERR command. Paragraph "f", page 35, of NIC 8246 defines the meaning of an ERR command with error code of 5 to be "socket (link) not connected". The error code is stated to apply to two cases, one in which a control command other than STR or RTS refers to a socket that is neither fully open nor fully closed, and the other in which a (non-control) message arrives over a link not being used for a connection. 4

The difficulty arises from the fact that the contents of the "data" field of the ERR command has distinctly different formats in the two cases. In the first, it is a host-host command, and in the second it is a message header. There is no reliable way for the code in the NCP receiving the ERR command (or a human reviewing an error log) to distinguish between the two cases, and therefore fullest use cannot be made of the ERR command. 5

The two cases are now defined to have different error codes. In addition, a new error code is defined, meaning "invalid host leader received". Therefore, paragraph "f" under "ERR - Error detected" is now replaced by the following: 6

f. Request on a non-open socket (Error code = 5) 7

A request other than an STR or RTS was made for a socket (perhaps referenced by link number) that is not party to an fully established connection. The socket's inappropriate state could either be that only one RFC has been sent (not yet open) or that only one CLS has been sent (not yet closed). The "data" field contains the command in error; the value of any fill necessary is zeros. 7a

g. Message on an unknown link (Error code = 6) 8

A message was received over a user link which is not currently being used for any connection. The contents of the "data" field are the message header followed by the first eight bits of text, if any, or zeros. 8a

h. Invalid host header (Error code = 7) 9

A message was received either over the control link or a valid user link that had a host header with invalid format. Examples of when this subtype would be appropriate are the following: the M1 or M2 fields were non-zero, the byte size was invalid (not 8 for a control link, zero for any link), or the declared length (byte size times byte count) exceeded the actual length. The contents of the "data" field is the message header padded with eight bits of zeros. 9a

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